NAEB JOURNAL
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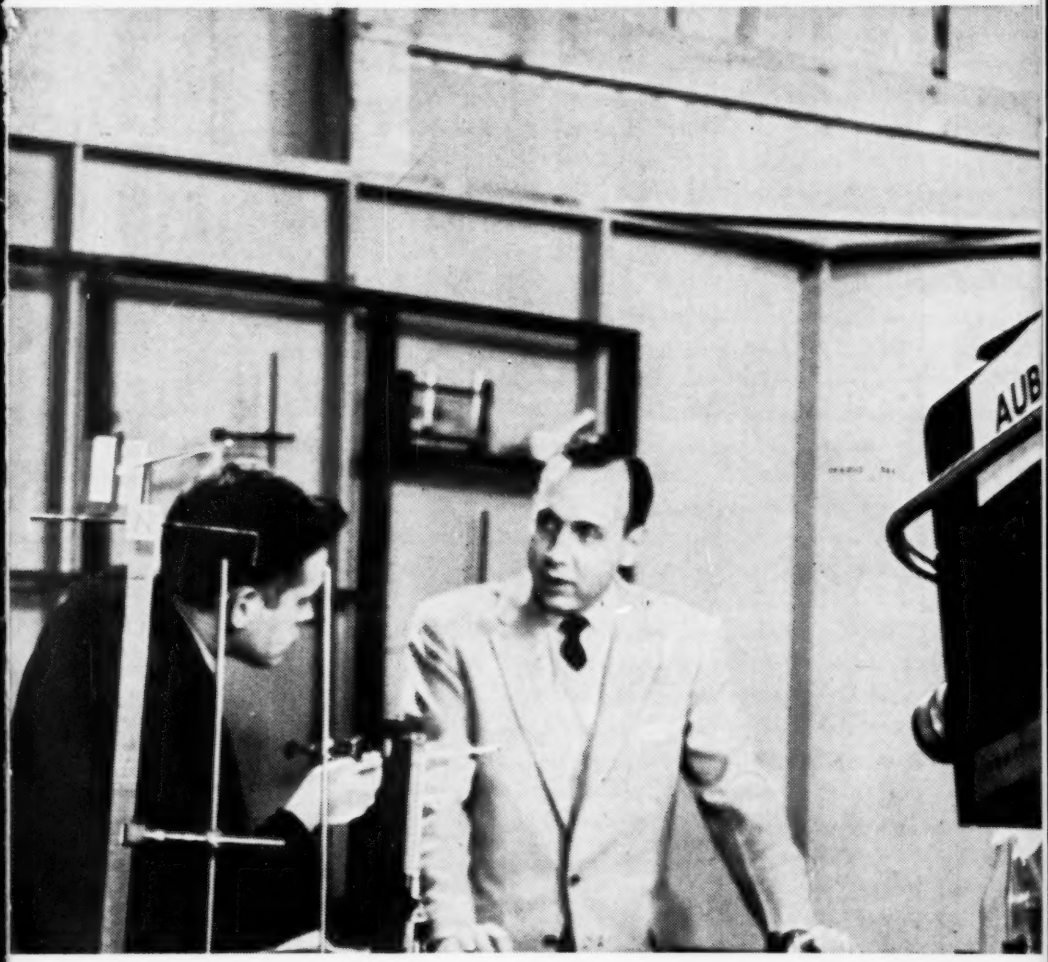

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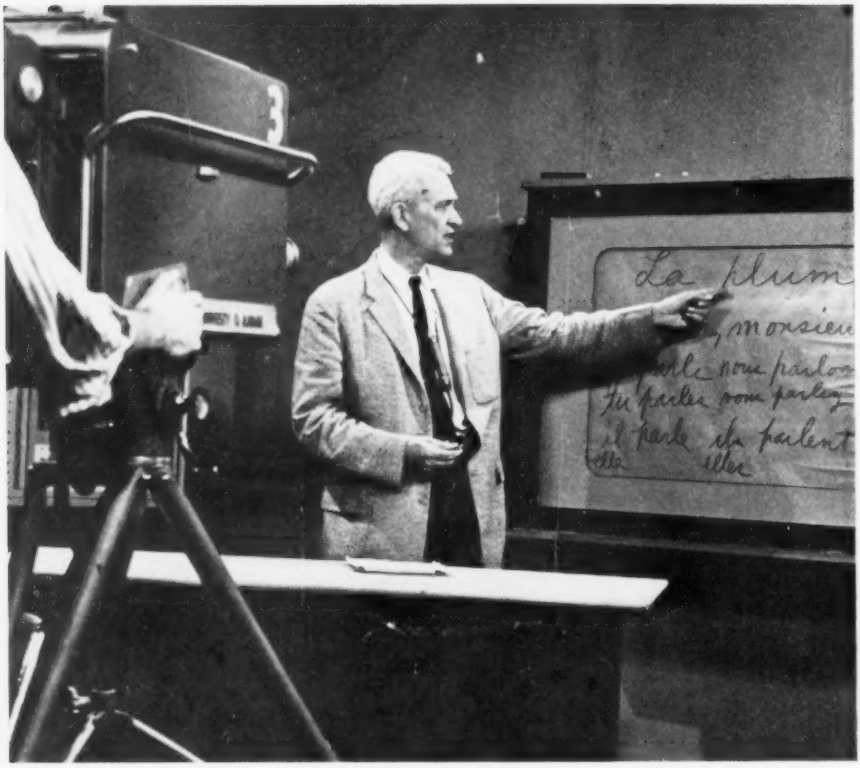

Alabama reports on its in-school programing. (See page 8). Here, Prof. Wade Coleman instructs basic college French.

ON THE COVER: Instructor Ken Hobbs (right) interviews guest on "Junior High School Science," Alabama Educational Television Commission. (See page 8).

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A New Teaching Tool

A comprehensive look at ETV, its history, and its potential

By W. R. G. BAKER

Vice President, General Electric Company. From an address given at the Syracuse University Conference on "Frontiers of Elementary Education."

● I WOULD LIKE to tell you about a new teaching tool that can help us improve the general productivity of our educational processes: educational television.

Educational television is a controversial topic. To the uninitiated, it may conjure up visions similar to George Orwell's *1984* or Huxley's *Brave New World* in which little Johnny would be forced to sit silently at his desk, transfixed by the steely-eyed monster of television.

Actually nothing could be farther from the truth. The use of television in education is controversial mainly to those who have never seen it in operation. And that is one of the reasons why I am speaking to you today. It is the responsibility of every one of us to be informed about the vast potential of this new instructional aid so we can tell others about it.

I would like to retrace, briefly, educational television's short history, and tell you what is actually being done in this field all over the country today. Then I will tell you about the organizations that are supporting it, how much it costs, and what you can do in your own communities to take advantage of this new teaching medium.

Perhaps I should begin by telling you what educational television is *not*. We are going to have to answer a lot of questions and clear up

several misconceptions because many exaggerated claims have already been made.

● EDUCATIONAL TELEVISION is not replacing the teacher in the classroom with a television set. It is not a substitute for a textbook or for homework. It is not a mechanical device for infusing knowledge painlessly. As Dr. Frank C. Baxter of the University of Southern California has said — and he is already a popular and experienced television educator — "Television is not a vending machine for higher learning. The coaxial cable alone will not pump culture into anyone's veins.

What is it then? It is the integration of the high impact value of television into our educational systems as a teaching tool. It is an audio-visual aid to speed learning, aid retention, and provide motivation for further learning. Television is the most challenging new medium we have available for transferring knowledge.

It combines the force of the picture with the immediacy and flexibility of the lecture hall. It brings together powerful stimuli — sight, sound, motion, and an awareness of the present.

Television can bring the whole world into the classroom and it can project the classroom beyond its walls and out into the world. Science laboratory experiments and homemaking demonstrations can be brought to thousands of people at a fraction of the cost of any other effective method of teaching. With it, residents of the most remote hamlets can take advantage of the very best teachers in the school system — or even in the entire state.

I would like to quote parts of a statement on the in-school uses of television which has been formulated by the Committee on Television of the American Council on Education.

"Currently, tremendous energy is being directed at the important task of adapting television to educational purposes. Presumably, these efforts

TV is not a vending machine for higher learning; . . .

stem from a desire to use the medium to extend educational opportunities or to improve the quality of the educational process. No responsible person has suggested to date that television . . . will or should supplant all other modes of education or that the total task of the schools could be handled in such manner . . .

"In any event, the basic criterion should be, 'How can TV improve education?' There is danger either in looking upon television as a 'cure-all' for educational ills on the one hand, or on the other, in failing to extend the exploration and experimentation over the total scope of the problem . . . Common sense indicates that we will not, at least in the near future, convert our schools and other educational institutions into great television stations . . . But, it would be

equally bad if we decided at any point in the future to concentrate upon a limited use of the medium after inadequate or incomplete exploration of its potential."

The committee statement goes on to describe four approaches to the use of television: total teaching, enriching segments, inaccessible resources, and field experience.

● "TOTAL TEACHING" involves an effort to provide all of the direct teaching by television. It is pointed out that such an approach can be justified for certain subject matter and particular grade or age levels under specific circumstances which can be determined only through comprehensive experimentation. The shortage of qualified science teachers at all levels, or qualified teachers of foreign languages at the elementary school level, might justify the presentation of "total teaching" experiences in these areas and not in others. Such development might in some cases be defensible locally but not justified on a national basis.

. . . it is an aid to speed learning and give motivation.

The "enriching segments" approach attempts to supplement and enrich the work of the teacher by providing materials which either are not available in the local setting, or not appropriately organized for proper classroom use. The televised materials are designed to bulwark, support, and enrich the learning process. They might involve, for example, the presentation of experiments in physics using costly or rare equipment; oral drill in French for elementary grades; short segments from a Shakespearean play done by professional actors; visits to great art galleries, museums, industrial plants, or zoos; demonstrations by great musicians, painters, writers, mechanics, or others; descriptive scenes showing various parts of the world, industrial, or governmental processes; bits of contemporary history; and other items of equal value.

In the "inaccessible resources" approach, the effort is made to provide a complete portion of the direct teaching. For example, rather than an experiment in elec-

W. R. G. BAKER

tronics, the complete electronics unit of the physics course would be presented by television. Or the entire poetry unit of the literature course could be provided.

● THE "FIELD EXPERIENCE" approach offers an extension of learning to present postgraduate clinics. Great opportunities exist in agricultural extension work to replace and support field activity with demonstrations conducted centrally via television. Similarly, the possibilities of conducting observations, field demonstrations, laboratory and clinical activities in the training programs of such professions as law, nursing, medicine, veterinary medicine, engineering, social work, and others need to be explored wherever possible under controlled conditions.

ETV combines the force of the motion picture with the immediacy of the lecture hall.

The Federal Communications Commission opened the door for the full development of academic television in its final allocation report of April 1952. This report reserved 242 channels for noncommercial educational television stations. Since then, a number of channels have been added. The present total is 258.

The FCC had been urged to allocate all the channels for commercial operation. Its decision to reserve a substantial number of channels for educational use was a courageous one. Widespread doubts had been expressed as to whether educators were ready, willing, and able to enter the highly competitive field of television. The Commission determined that American education deserved that opportunity. Its decision has made possible a rich opportunity for the American people, providing the public a new degree of freedom of choice in television reception.

In actual practice, educational television takes two distinct forms. One type of installation is called "closed circuit"; the other is called "broadcast," or sometimes, "open circuit." You are all familiar with the broadcast type which is exactly the same sort of service as that provided by commercial stations. In the closed-circuit operation, programs are carried by coaxial cable from a central studio or studios to the various receivers.

Let us first examine some of the things that are being done in educational institutions around the country which have broadcast-type installations. There are, at present, 24 noncommercial educational stations on the air and it is expected that 6 more will begin broadcasting soon.

Station WOI-TV at Ames, Iowa, was the first television station to be owned and operated by an educational institution. It went on the air in February 1950. It operates on commercial Channel 5, having received its assignment prior to the reservation of educational channels.

KUHT in Houston, Texas, was

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ETV and Continuation Education

● "THE AUDIENCE of an ETV station," according to James K. Sanbourne, advertising manager, The Denver National Bank, "is an intellectually curious audience." With such an audience and the ability to bring to a whole community the great teachers of the day, ETV has a dual responsibility. Dr. James Killian, president, Massachusetts Institute of Technology, puts it this way: "Educational TV should feed the hungry and stimulate the appetite of the well fed." These objectives, then, must be accepted as the primary responsibility of the nation's growing number of ETV stations, which now total 24.

Are these important responsibilities being discharged? A quick survey of the current programs of existing ETV stations reveals that they are. The operators of ETV stations, without exception, are availing themselves of the wealth of program material available in the colleges and universities in their areas. For example, KTCA-TV, the new Twin Cities educational television station which began telecasting officially on September 16, 1957, offers five choice evening hours each week (9 to 10 p.m. Monday through Friday) of programs produced by the University of Minnesota. There are nine series, eight of which are presented for a half hour each week and one for two half hours each week. One of the programs, "Your Government," may be taken for undergraduate credit.

The nine series are: "Your Government," which is designed to provide the intelligent citizen with information concerning how his government operates; "At Home with Music," which presents some of the members of the Music Department performing fine music in an informal manner; "Selecting and Reading Current Books, which aims to help the listener make intelligent choices in selecting current books; "In Search of Science," which, through the use of authentic models of ancient instruments, recounts the fascinating story of the quest for scientific knowledge in early civilization; "The Artist at Work," which removes some of the mystery of art by providing the opportunity to watch a skilled artist at work; "Our Changing Society," which gives an analysis of the social problems that the changing patterns of modern life have created; "Town and Country," which includes information of importance to gardeners, home owners, and farmers; "Minnesota's Wildlife Resources," which discusses wildlife in Minnesota, its problems and its possibilities; and "TV Journal," which analyzes, interprets, and illuminates currents of world and national news.

—TRACY F. TYLER, *Editor.*

Alabama ETV Progresses

An ETV manager explains project for in-school programming

By **Raymond D. Hurlbert**

General Manager, Alabama Educational Television Commission.

● YOU'VE PROBABLY SEEN the same contrasts as I, if you've been in ETV during the past four years. Originally many residents throughout our state watched the creation of the Alabama Educational Television network as (1) a state folly of financing ETV stations which would be sold at state expense to commercial enterprises, (2) a novelty which would attract only a few "eggheads." (3) a "catch all" for programs which commercial TV stations didn't want, (4) a guise to tie-up competing commercial channels. Or to put it plainly, ETV in Alabama would be a miserable flop in less than a year.

Yet in September of this year, we at AET network are readying to enter our fourth year with 61 hours and 15 minutes of weekly programming. We have three channels simultaneously telecasting programs originating from the campus of Alabama Polytechnic Institute and the University of Alabama, and from studios in Birmingham operated and financed by the five Jefferson County public school systems. Also, our commission has designated Alabama College as a fourth programming agency when it establishes studios on its campus at Montevallo. Our future plans include studios in Montgomery and Mobile, and the activation of other FCC allocated Alabama ETV channels.

● OUR MAIL and telephone comments have come from viewers in every income and background level, and without qualification, practically all have been complimentary. The majority of the viewer remarks now request information on our in-school project. Adults *want* to take high school

courses at home, parents *want* to follow what their children are learning in school via ETV, and teachers *want* to use ETV in their classes. A total of 207 white and 110 Negro high schools, 121 white junior high schools, and an undetermined number of elementary and Negro junior high schools are within our network coverage and can utilize this in-school schedule.

Since ETV has now been accepted wherever it has been established in the United States, and there is serious consideration of additional ETV state and regional networks, undoubtedly many will be interested in our involvements to bring this fall's ETV in-school programming into being.

Efforts were started on notification from the Fund for the Advancement of Education of monies available for the creation of in-school productions amounting to $72,000 annually for three years in matching funds. A "Special Television Project Executive Committee" which was assembled includes Dr. Clyde Blair, Alabama State Department of Education; Dr. Richard Eastwood, Dean of the

Raymond Hurlbert (right) and General Electric representative Tom Bost inspect a studio before broadcast of a "Foreign Folksong" series program.

University of Alabama, Birmingham Extension Center; Dr. J. W. Letson, superintendent of Bessemer Public Schools, Dr. D. W. Mullins, Alabama Polytechnic Institute; and myself.

After this executive board entered initial planning and set policies, the agency (studio) directors were delegated responsibilities for certain areas of the state: to meet with educators on all levels, to investigate what type of subjects were needed in both metropolitan and rural schools because of teacher shortages, to determine the times preferred for the telecasts, and to discuss what should constitute the telecourse content. The agency directors, Graydon Ausmus, University of Alabama Broadcasting Services; Dr. Harry Lyle, Birmingham Area Educational Television, Inc.; and Edward Wegener, Auburn Television, Alabama Polytechnic Institute; then met to decide which subjects were requested by the majority of educators (from superintendents to individual classroom teachers) and their reasons for wanting them, and to compare time-slot recommendations.

AET's new program already gets compliments from educators, parents, students, and industry.

● SIFTED DOWN to those courses which could be scheduled in the network-day-hours available, with an even distribution of live studio scheduling, each director sought qualified personnel to work as producer-director of the in-school programming from his studio. Two of the three employed by the three agencies are former Alabama public school teachers; the other, a telecommunications graduate. These men, with the agency directors, in a series of meetings with the Commission staff, sought instructors qualified to teach via TV those subjects which had been selected; agreed on the method of presentation; mutually hashed over problems of securing visuals, film clips, occasional guests skilled in fields associated with topics to be taught; and decided how all concerned would be informed of telecourses which would be presented.

During this same period the Executive Committee employed Dr. James Moultrie, a former superintendent of schools and public school teacher, as special AETV project director. His job is to coordinate the entire in-school project by meeting with educators throughout the state to inform them of the venture, aid them in TV set placement (depending on the number of sets in the school), direct research, and prepare a report on the project for the fund.

A random representation of educators from the network coverage area were invited to work out telecourse details with the in-school producer-director and TV instructor in their field of education. Be-

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School Broadcasting—Which Way?

Direct teaching is not enough; enrichment needs must be met

● AT A RECENT conference on educational television at Harvard University, Robert Saudek, producer of Omnibus, said, "Television must not rise out of radio's mediocrity." School broadcasters have a responsibility to see that this does not happen in their particular area of education.

It is not an easy task that Mr. Saudek has set for educators who concern themselves with broadcasting; for it is a strange world in which the educational broadcaster finds himself today. Life has suddenly become disturbingly complex. Programing has evolved from a small FM operation into television or even into closed-circuit television. Gone are the days when a producer could hand a script to an adult to read lines intended to represent a child. He is now thinking in terms of high-powered television productions with intricate lighting and period costuming. He is plagued with personnel and technical problems. How he must long for the old days of a microphone and a sound wagon.

Because, for the most part, school broadcasters are using some educational station as an outlet, they are caught up in all the problems that trouble educational stations today. Many of these problems rise out of mistakes that edu-

By **MARGARET C. TYLER**

Supervisor, Ohio School of The Air, Ohio State University. Reprinted from EDUCATIONAL RESEARCH BULLETIN, 36: 167-73, May 8, 1957, through the courtesy of the author and editor.

cational broadcasters, themselves, are making. They seem to be reacting somewhat frantically to undeserved criticism from the outside. There is concern about the number of educational television stations. Because there are only sixty-one educational television channels that have been picked up, there is a feeling that this number must be increased rapidly. Adequate staffing and adequate budgeting can wait.

Educational radio and television is in a fluid state. Radio broadcasting is affected because many stations are in a period of transition from radio to a radio-television setup. Radio is losing its glamor. Everyone wants to break into television. Programing and production in radio are losing well-trained people to television with little chance of adequately replacing them. As a result, educational radio is suffering, and school broadcasting shares this unhappy state. In many cases, there are those who want to move into television but hate to see valuable radio series die. This results in station employees attempting to do two jobs in the time formerly given to one. In a few cases, where television stations have been on the air long enough to be well established, there is recognition of a resurgent demand on the part of the public for good radio fare and there is an attempt to stabilize the radio-television broadcasting and to give to each the time and personnel that it demands. But, for the most part, educational stations are in a transitional stage and unless constant vigilance is maintained, the quality of programs will be lowered and the mediocrity that Mr. Saudek deplores will be inevitable.

This, then, is the situation in which the school broadcaster finds himself. This, then, is why, more than in any other field of educational radio or television, school broadcasting faces a necessary revision of objectives. Trends must be studied and policies re-evaluated. Only by doing this can the school broadcaster face up to the myriad problems in his own area as they pyramid above those he has inherited from the field of educational broadcasting as a whole.

● IF WE TAKE a critical look at school broadcasting, for instance, we will realize that since the coming of school television, there has been a steady trend away from the type of programing that stresses enrichment values toward those that are very close to teacher replacement. Many broadcasters have fallen into the habit of speaking of individual programs as *lessons* rather than as *broadcasts.* The word *teacher* rather than *broadcaster* is being increasingly used. Is this to be the future pattern of school broadcasting? Is the current problem of teacher shortage more and more to focus the attention of school broadcasters on the informational and the direct teaching broadcast? Do we no longer care about stirring a child's imagination, broadening his horizon, or stimulating creative activity? The report of a seminar on in-school telecasting, held in Washington,

June 1955, under the sponsorship of the Joint Committee on Educational Television, quotes William Kottmeyer of the Committee as saying, "May I summarize by saying that we have lost some faith in the philosophy of enriching the curriculum. Perhaps we have not enriched it properly. At any rate, we are currently bent on direct teaching via television over into the heart of the curriculum."[1] Mr. Kottmeyer's statement should stir the school broadcaster to consider

School broadcasting faces a necessary revision of objectives.

the present status of his field. Should he plan programing in one direction only? Should he decide to forget enrichment broadcasts? Should he try to follow both the enrichment path and that of direct teaching simultaneously? These are questions that must be answered before school broadcasting can take its rightful place in the communications field.

Certainly the school broadcaster has a responsibility to do what he can to alleviate the teacher shortage and the bulging schoolhouse. We hear a great deal today about broadcasts that use "master teachers." Such series have a dual objective. They emphasize instruction for the school child, but at the same time there is the hope that some teacher training will be accomplished. Planning such broadcasts has its pitfalls. For whom do you really do your planning, for the twenty-five children in the classroom or for the one teacher? Which is more important?

On the face of things it may seem that the children should be of primary concern. But we must think also of the classes that through the years will come under the instruction of an individual teacher. Can the two jobs be successfully done simultaneously? What about the attitude of the run-of-the-mill teacher toward having a colleague singled out as a "master teacher"? May she not ask, "What kind of teacher am I?" and do a worse job than ever because she is further convinced of her own inadequacies?

Yet this challenge must be met. There is a real need to show teachers improved educational techniques. There are a host of them in American classrooms who have never seen top-flight teaching. They may even have done practice teaching under those who represent their profession indifferently well. But it imposes a terrific responsibility on the broadcaster to practice good public relations so that the help is accepted in the right spirit and, above all, to choose the master teacher carefully.

● THESE BROADCASTS do not have to be an either-or proposition. They do not have to be instruction *per se* or purely an en-

1. *Television in Our Schools.* Washington, D. C.: Joint Committee on Educational Television, 1955, p. 2.

richment broadcast. Unless the master teacher succeeds in giving to the listeners those plus values that are beyond the realm of the informational, the children are still going to be confined within the covers of the textbook and the encyclopedia. The role of the radio or television teacher must be interpreted in the broad sense of the word. He must be able to teach not only pertinent facts about a certain country; he must make the listener feel that for the duration of the broadcast he has been a part of its culture. It is not enough to teach facts about pioneer living; the child must feel the dust of the road in his throat, the aching muscles of those who cut a path through the wilderness, the thrill of exploring hidden valleys and streams. The true master teacher will place more value on the stars in the eyes of a child rather than on his ability to absorb factual material and to give it back in a questionnaire. If our teachers are to imitate our radio and television teachers, let us be sure that they have inspirational qualities as well as ability to instruct. And let us work toward the right kind of program acceptance on the part of teachers. Teachers can be made to feel that broadcasts are an aid to what they are doing in the classroom, not a replacement of their efforts. There are things that can be done by radio and television that will relieve the teacher for her more important tasks involving personal help and guidance.

Much of this relief to the teaching load is being done in the form of closed-circuit television broadcasts. Starting on a university and college level this type of instruction has been trickling down into the high school and the elementary school. During the current academic year, for instance, all freshman mathematics courses are being taught by closed-circuit television at Washington University in St. Louis. The Penn State and the University of Iowa experiments are examples of what has been done on a university level. The time has passed when we are wondering whether or not we can teach successfully by television. We know we can. All of the experiments so far seem to prove that instruction by television is as effective as mass classroom teaching. Less has been lone on a secondary and an elementary level. The most significant broadcasting of this type of closed-circuit teaching has been done at St. Louis and Pittsburgh. Here, as on the academic level, early experimentation shows no significant difference in learning or retention between groups taught by television and groups taught in the usual classroom manner. But we need to interpret carefully the findings resulting from such television teaching. A "no significant difference" report may mean only that television is doing an equally inadequate job with teachers who face overcrowded classrooms and are themselves poorly trained for the task.

Perhaps the most revealing facet in all this closed-circuit television

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School Public Relations

Radio and TV can help tell the public about its schools

By WILLIAM B. LEVENSON

Deputy Superintendent, Cleveland, Ohio, Schools. Reprinted from SCHOOL BOARD JOURNAL, September 1957.

Each of us has his own concept of public relations. A wag once defined it as the art of not treating the public as you do your own relations. I prefer this definition, "Public relations is good performance, properly appreciated, because it is adequately communicated." Notice what comes first — good performance. I doubt very much if the best public relations procedures will in the long run make for continued acceptance or support of a poor product or poor service. Public relations is not a slick way of getting approval of mediocrity.

Unfortunately, too many school people think of public relations in a negative sense — as a defensive technique — as a contrived answer to criticism. If our voice is heard only in protest, only after complaint, then recalling Hamlet many will observe, "The lady doth protest too much . . ."

The Schools Are Public

Before discussing radio and television, permit me to make a few more general comments because they condition the school use of the mass media. As one works in a school or school system for some length of time, he perhaps naturally develops proprietary ideas — almost a sense of ownership. Loyalty is one thing but the notion that what goes on in the school is no one else's business is, of course, foolish.

First the schools are public. They belong to the people, and the people have a perfect right, in fact an obligation, to criticize constructively. Let us not be too thin skinned about it.

No social institution meets with universal approval, surely not our government, not even our churches. Is it not silly to get panicky every time a magazine article or a newspaper item criticizing the schools makes its appearance? If the shoe fits, we have a job to do; if it doesn't, we have little to worry about.

The greater tragedy would be to have no one talk about the schools, where apathy and indifference reign and where all orders come from some distant Politburo which no one dares question. We cannot have traditional American grassroot development of public schools without some disagreement.

In communicating with the public, I would suggest we keep in mind two principles: (1) never underestimate the public's intelligence; (2) never overestimate the public's information. Too often we confuse ignorance with lack of intelligence.

There is nothing mysterious or esoteric about public relations. One does not need a Madison Avenue address or a gray flannel suit to be adept at it. In fact, the best practitioners of public relations operate at the personal level — they simply like people and have the knack of making evident their desire to be of service. Note please that we are not talking about mere publicity or propaganda. Public relations is much more than that. It includes the sum total of all your personal relations. The teacher who does his job well is at the same time achieving the finest kind of public relations.

The catch is that in a complex, busy society, the perimeter of our personal contacts becomes more and more limited. Most people in your community probably do not know you or your institution—they know *about* you and *about* your school system. Most of this information is spread by word of mouth: comments of pupils, the reactions of parents, utterances by the school staff, some reports come from direct observations at school functions, and a good deal by newspaper accounts. However, most of this is subjective, certainly haphazard and sporadic.

There is nothing mysterious or esoteric about public relations.

Few would doubt that part of an effective public relations program at least in a large urban community involves a systematic use of the mass media. Let us grant that television and radio suffer from one weakness — they are not two-way in their nature — there is no actual exchange of meanings, but that is far outweighed by the power and persuasiveness of these media.

Television and School PR

The appeal of television is well known. More Americans spend more time viewing television than they do on any other activity, excluding sleeping and working. In

addition, countless hours are spent during the day listening to radio. Realistic businessmen invest huge sums sponsoring programs from early in the morning until after midnight. Politicians use the media at great expense to persuade voters. Both of these media, radio and television, are unique in that they are intimate and persuasive. The keynote in their use is intimacy. From the fireside chats of F.D.R. to the subtle selling of Arthur Godfrey, planned informality has been the highway to power and profits.

The schools have several advantages in the use of these media. In terms of audience:

First, the procedures discussed are familiar to many citizens, for they attended the schools.

Second, the public has a large investment in the schools, and it may be true that where a man's dollars are his heart is.

Third, parents have a vital concern in their children and the institution in which they spend a large part of the day.

The schools have advantages in terms of programming:

First, in many instances it is possible for a school system to secure free time with which to broadcast. It is more difficult to secure such time on television than it is on radio, and it is always difficult to get the best time in terms of listener appeal.

Second, leading citizens will frequently contribute their services to take part in school programs.

The following is a brief summary of some of the lessons we have learned as a result of planning and presenting more than 500 television programs over local Cleveland stations. We are still learning with each new program. Perhaps this list will be helpful to those planning to use television for school purposes.

1. Ideas for programs are plentiful; what counts much more is the manner in which they are executed. Talent, not necessarily brains, is needed. There is a distinction in a creative field. The keenest scholars are often television failures.

Eleven lessons to help you in planning your program.

2. The personality selected for the program is far more important than the subject chosen.

3. Use the little picture to show the big idea. Do it through a person, keeping always in mind that people want to know about people.

4. Whenever possible, *show* it, do not talk about it.

5. Simplify. It is far better to explain one important idea in various compelling ways than many ideas in dull fashion.

6. Tell what, show what, but emphasize *why*. For example: *Why* is phonics only part of the reading program? *Why* is oral spelling not stressed as it once was? *Why* have handwriting teaching methods changed?

7. Use your community experts to provide audience attraction. For instance: in a hobby series use the champions in the district, in a health series use specialists suggested by the Medical Society.

8. Avoid pedageese. People are disposed to believe a message only if it is presented in terms of their own experience. Telling is not necessarily communicating.

9. Beware of audience loss by contrast in program standards. Amateurish dramatics is fatal. Do what Hollywood cannot do. Localize in terms of familiar people and familiar issues.

10. Remember that good will and understanding are often a by-product. Example: a visual demonstration of Science Fair entries is more effective than a harangue insisting that science is still taught in the schools.

11. Publicize your program in advance. There is always a gap between the audience you have and the one you could have had.

● FAMILIES WITH children are more likely to be regular viewers of educational television than those without youngsters, according to a survey made by Stanford University's Institute for Communications Research, under the direction of Dr. Wilbur Schramm.

The survey, made for the Educational Television and Radio Center, Ann Arbor, Michigan, was conducted in the San Francisco Bay area, where community education station KQED has between 380,000 and 576,000 viewers. Dr. Ryland Crary, director of education for the ETRC, feels the KQED audience may be fairly typical of ETV audiences in other cities.

According to the survey, the adult viewers of ETV are serious minded people who read hard news and editorials instead of the lighter items in newspapers. They are interested in cultural pursuits, and

they read books and magazines extensively.

The survey showed that families with children rated ETV more interesting and valuable than other kinds of TV. Their viewing time and their satisfaction with ETV increased with the number of children they had. The survey concluded that the popularity of ETV among families with children is an indication that TV is a child's handy companion, taking over some of the informational duties which formerly fell to harrassed parents.

Apparently typical viewers of ETV use the educational station very selectively, a program at a time. Only a small portion of ETV viewers leave their sets tuned to educational stations for long stretches at a time, according to Dr. Crary.

Programs with largest audiences during the test week went into some 20,000 homes and were seen by probably 35,000 to 50,000 viewers.

• • •

● The University of Texas Radio-Television conducting an experiment in the use of television as an aid to general science teaching in grade schools. "Science Quest," sented each Saturday morning in October over KTBC-TV, Austin. Dr. M. Vere DeVault, associate professor of elementary education, is moderator. Jan Leech, 13, formerly of El Paso, appears on the program as the moderator's "secretary."

Travis County school children in the fourth, fifth, and sixth grades submit questions by mail to a panel of University professors. The professors answer the questions by means of experiments and demonstrations, utilizing facilities of their University laboratories.

Faculty members appearing on "Science Quest" include Drs. Frank N. Edmonds, assistant professor of mathematics and astronomy; Irwin Spear, assistant professor of botany; William H. R. Shaw, associate professor of chemistry; William R. Muehlberger, assistant professor of geology, and Robert N. Little, physics professor.

• • •

● Ithaca College, New York, will construct and equip one of the most modern college radio-television studios in the country, according to President Howard I. Dillingham.

Construction work has begun on the studios, which will occupy a new second floor over the college library. It is planned to have them ready for classroom instruction by the second semester.

An elevated classroom with both audio and visual monitors will face the television studio. Students can observe through a soundproof glass wall what is going on in the studio. The classroom will be wired so that students can hear directions being given on the studio floor by producers and directors.

The new studios will include the

classroom seating 54 students, two radio studios, a radio control room, a projector room for television films, a music library, a news room, office for student crews, two faculty offices large enough for small seminars, and a repair shop.

Construction is under the supervision of Michael R. Hanna, general manager of radio station WHCU, Ithaca, and a former director of the National Association of Radio and Television Broadcasters.

Both television and radio programs will be produced for the public. Evening telecasts will be provided for residents of the Ithaca area through the cooperation of the operator of the local television cable franchise. It is estimated that college programs will be available to 10,000 Ithaca-area viewers. The college radio station will continue to be on the air five nights each week with AM and FM programs.

Plans are being made to provide graduate extension courses outside the Ithaca area through microwave and coaxial television cable connections.

Officials of a number of schools within a radius of 100 miles, have expressed an interest in college-produced television programs for their pupils.

Entertainment programs featuring faculty and students, especially those of the music and drama departments, will be scheduled.

Public service programs, in which local civic leaders and organizations will participate are also planned.

Through portable equipment, the studio staff can pick up live programs on the street, at athletic events, concerts, plays, and elsewhere in the community. The laboratory will be so constructed that it will tie in with the drama department and college theater facilities. The dressing rooms and scene shop will be next to the new studios.

Broadcasting—Which Way?

Continued from page **14**

is that the educational broadcaster has grown in self-confidence. He no longer feels the need to justify himself for devoting staff time to programing for a small minority. Station KUON at the University of Nebraska has a television course in lip reading for handicapped children. Station KSLH in St. Louis has for years been broadcasting radio programs in French for use in the elementary grades, and plans the series for a small group of school children in these grade

levels. No longer does the education station feel that it must compete with commercial stations for audience ratings. It has its own job to do and is satisfied to give service where service is needed and desirable.

The educational broadcaster must be careful not to confuse certain types of service broadcasting with actual school broadcasting. There are school administrators who insist that the first job of the school broadcaster is to do a type of public-relations broadcast in which the schools are interpreted to the public. In some communities this has proved a valuable means of interesting the citizenry in the passing of bond issues, in securing teachers, and in giving the parents an understanding of the problems that face the school administration. In Houston, Texas, meetings of the Board of Education are regularly telecast. This type program will likely turn out to be increasingly valuable as a public service. Like straight teaching by closed-circuit television, however, this must not be allowed to overshadow the first job of the school broadcaster. Above all, let us not label such broadcast activities as "educational research." If our broadcasting is to be only of this type, let us not claim stature and significance for the available and expedient.

Simplicity should accompany unity of idea in broadcasts.

● IF SCHOOL BROADCASTING is to achieve its potentialities, it must be more than a substitute for a classroom teacher or a public-relations medium for a board of education. Both by radio and by television we must place our emphasis upon the enrichment broadcast. We have done this for many years by radio but with the coming of television, which is a "natural" for the demonstration, we have assumed that this is the most important type of educational telecast. With imaginative programing even a science broadcast can combine the demonstration with the enrichment program. Such a broadcast will need a skillful person who can project his personality into the classroom. He will forget about being an expert in his field. He will be simply a person who has something to communicate to the children. Long ago, school broadcasters learned not to use technical language because it was confusing to children. We need also to learn that a lot of technical equipment confuses and distracts them. Too many frustrating mechanical devices can clutter up a child's mind even more than too many ideas on one broadcast. Simplicity should be achieved along with unity of idea.

Participation, too, is highly desirable. Some day, for instance, a science broadcast will be developed where the children feel that they are a part of the experiment; where they have the fun of collecting the

materials which they will use as directed by the television teacher. These may be only a few dried beans and a straw or merely a collection of leaves that the child has made. This will also be a broadcast from which the child carries away only one important scientific principle if it is no more difficult to understand than that "things can be classified."

There is so much that can be done for the school child by either radio or television that the classroom teacher cannot possibly do because she does not have access to the necessary source materials. This is particularly true in the realm of regional and local education. Regional broadcasting will always remain the responsibility of the regional and local station. It is the job of that station to interpret the region to the child who lives in it. Many states are now requiring the teaching of state history in the classrooms. School broadcasts can be developed to help the teachers in this area and teachers' manuals can further aid in the meaningful use of the series. Regional broadcasts can develop in a child a pride in his state or local community and a loyalty to its traditions. But more important, the listener can be made to feel that he shared the experiences of the early living in his own community. He can come away from a broadcast with a feeling that he has actually attended a cabin-raising or a salt-boiling. The fields of music, literature, and art are alive with possibilities for thrilling school broadcasts. Safety education, health, and conservation of natural resources bring to the school broadcaster tremendous challenges for either radio or television.

● SCHOOL BROADCASTING, to resort to a *cliché*, is at the crossroads. If it is to be effective it must go three ways at once. We cannot call ourselves educators unless we rise to the challenge of the crowded classrooms and do what we can to help the teachers. This means planning for specific audiences but it does not mean unimaginative planning. We must also plan programs for the enrichment needs of our children. To neglect either is to condemn ourselves to professional indifference. We must constantly keep in mind that there is no such thing as a "captive" audience. There are captive children in our schools, but it is up to the broadcaster to capture the mind and to stimulate it.

If we are really to put the welfare of the school child first, we will blaze a third trail for school broadcasting. We will travel a third path that is unique in the broadcasting world. We will use radio and television as a means of cutting down the amount of listening and watching done by the school child. It is frightening to realize that the average American child spends more time listening to radio and watching television than he does in any other activity except sleeping, and this includes going to school. What is happening to reading in America? What is happen-

ing to participation sports? Where are the family outings of yesterday and the evenings of friendly conversation? What is the educator's answer to the recent cartoon depicting a child and her mother at a three-ring circus and the mother calming the weeping child by saying, "Don't worry, we'll get home in time to watch Lassie"? School broadcasters should be thinking about that answer. Is it too much to hope that we might interest a child in reading a book or a newspaper? Is it beyond the realm of possibility that we might stimulate some contemplative thinking without the background of music or the human voice? School broadcasting is in the same position as the man in the story who jumped on his horse and ride off in three directions. Somehow school broadcasters must find a way to master this difficult feat or we will fail to meet the ongoing challenge of school radio as well as the unlimited challenge of school television.

Alabama ETV Progresses

Continued from page 10

sides program content, study guides were created for each direct and supplementary course. These guides are especially valuable to those classroom teachers who are not fully qualified to instruct a particular subject, but are sufficiently skilled to serve as a tutor. Each page of the guide informs how to ready the class for the day's ETV lesson, gives details of the TV program content, and gives suggested follow-up questions and assignments. These guides were then distributed to each teacher in the network coverage area who acknowledged plans to include ETV utilization.

● WITH THOSE study guides dealing with direct teaching lessons were sent pre-ETV-study tests. These tests were given students as part of the research to check the assets and faults of ETV state-wide teaching.

All in AETC executive positions spent many days from mid-August to mid-September talking — talking to PTA groups, educators, civic clubs — talking to anyone who would allow us to push ETV into their ears. The commission, along with Dr. Moultries' office, worked with the press, mailed out thousands of releases to educators and contacted affiliated groups to explain this fall the AETV network telecasts will present carefully created high caliber educational series.

Monday, September 16th at 9:45 a.m. it started . . . this ambitious in-school schedule . . and comments already received from educators, parents, and students alike indicate it is being well received—quite a

contrast to our first beginnings. We now belong.

Home - town - level compliments are always welcome, but making this effort on the part of all connected with the network even more worthwhile are statements such as the recent acknowledgement by Dr. W. R. G. Baker, vice-president, General Electric Corporation. In addressing the recent Syracuse University Conference on "Frontier of Elementary Education," (see page 3) he praised all ETV in the United States and with special reference to Alabama as doing "some of the finest educational television work today."

TV: New Teaching Tool

Continued from page 6

the first station in the nation to operate on a reserved channel. The University of Houston and Houston Independent School District are authorized by the FCC to operate the station. It began operation in May 25, 1953. Supported by the University of Houston, the school board, and various community organizations, it has provided more than 5,000 hours of programs in its more than four years of operation.

The station has produced more than 400 hours of local public service programs for 100 public service agencies. Music, art, and public affairs are featured in the program schedules. According to reports from the station, one regular forum on international affairs attracts more viewers each week than the total yearly attendance at lectures on these topics in the area.

Station WQED in Pittsburgh has attracted nationwide interest. Daily teaching by television is conducted in fifth grade reading, arithmetic, history, and geography. Twenty-eight classes in 23 different school buildings are involved. Twenty-minute television lessons are given by expert teachers, with varying periods allotted for follow-up by teachers in the classroom. A number of control groups have been established to allow comparison of the television classes' achievement with that of students taught the same subjects under ordinary conditions.

• ANOTHER EXPERIMENT in Pittsburgh is an introductory course in physics offered to high school students in 11 separate buildings. This is an experiment in "master teaching." Dr. Harvey White, professor of physics at the University of California, one of the country's outstanding teachers of this subject, gives this course. Teachers are present in the classroom to follow up the television lesson period. But the television teaching, supplemented by a textbook, is actually sufficient to provide all necessary instruction. Since it could be offered in the hundreds of schools where physics now is not taught at all, the whole course is being filmed and will be made available to schools throughout the

country.

These are typical examples of what is being done in cities throughout the country today. At this point, one problem in regard to instructional television should be mentioned. About two-thirds of the educational channels are in the ultrahigh frequency or U H F bands. However, most commercial broadcasting is done in the familiar Channels 1 to 13 very-high frequency or VHF bands. Therefore, due to this technical problem, homes with VHF sets cannot pick up programs broadcast by educational stations operating in the UHF channels. This is a complex problem which will not be discussed here. I should say that the Federal Communications Commission is working on it and it is expected that some practical solution will be found.

Some of the finest educational television work today is being done in the state of Alabama. Last fall, Alabama inaugurated the first state-wide educational television network in the country. It is appropriately called the "IQ" network and its stations are WTIQ, WBIQ, and WAIQ. These three stations, operating in VHF channels, make educational programs available to 90 per cent of the population of the entire state.

Programs originate in the three studios of the University of Alabama at Tuscaloosa, the Alabama Polytechnic Institute at Auburn, and the Greater Birmingham Area Educational Television Association. These three stations, connected by micro-wave relay, are currently programming 50 hours a week, going on the air at noon each weekday and broadcasting until 10 in the evening.

From 75 to 80 per cent of the programs are "live." The rest are on film. Thousands of Alabama school children have already studied reading, writing, mathematics, music, and government through television in the classroom. The afternoon programs are designed to supplement courses in the regular school curriculum, from first grade through high school. Program notes are distributed in advance of each new series so teachers can integrate the television lessons into their regular schedule and be prepared to answer specific questions students may have about any particular program. The evening programs are aimed at the adult level.

● THE PURPOSE and possibilities of instructional television in Alabama have been well stated by Raymond D. Hurlbert, general manager of the Alabama Educational Television Commission. Mr. Hurlbert has said, "The philosophy behind the development of educational television in Alabama has been very important in shaping the whole program. If what we were already doing in public education is sound, then it is sound to use television to bring it to more people. On this basis, non-commercial educational television will live and grow, for there is a popular hunger today for general information, systematic learning, and intellectual

and cultural entertainment. In our country and in our time, educational television is the best practical means for informing the electorate and increasing public understanding. It should be a providential instrument for insuring the perpetuation of our democratic society."

Let us see how the Alabama state network is implementing these aims and objectives. A live telecast of Puccini's opera "La Boheme" from the University of Alabama was probably the first live telecast of an entire opera on educational television.

In September 1955, the network carried its first "Spectacular." Nearly 100 persons, including a ballet company, two choirs, and a dramatic group participated in a 90-minute show based on Birmingham's Festival of Arts. Prize winning works of Alabama artists, including poets, writers, composers, architects, choreographers, and photographers were included in the program.

Here is a sampling of the programs that might be seen in a typical day by the people of Alabama, in their schools or in their homes. For the pupils of grades 1 to 3, there might be primary Spanish or a music appreciation program; for grades 4 to 6, an art appreciation course; for older students, a science program or one in home economics.

At the adult level, here are some of the programs that have been used. It should be noted that these are not simply individual programs but series of programs, covering several hours of viewing each week or each month. There was a refresher course in shorthand; a beginning course in typing; courses in algebra and geometry; a course in the operation of federal and state tax systems, with special instructions on the preparation of income tax returns. There was a series on American history, a series entitled the "ABC's of Investment," programs in French, a series entitled "Ideas in Art," a general science series called "The Living World Around Us," and a series entitled "Ballet for Beginners."

It is interesting to note that the cost of a year's operation of the entire Alabama state network is no greater than the cost of a one-hour commercial "Spectacular" on a national network.

Now let us take a look at closed circuit educational television. This type of system has two main advantages. First, no broadcasting permit or channel assignment from the FCC is needed because the programs do not travel through the air. Second, closed-circuit is relatively inexpensive when used in a restricted geographical area. No costly transmitter, tower, or antenna are necessary. The programs are piped directly from the studio into the classrooms at roughly one-fifth the studio cost of a similar broadcast installation.

● THE BEST-KNOWN experiment in closed-circuit instruction is now taking place in Hagerstown, Maryland. Beginning last fall,

6,000 children in the eight public schools of Hagerstown began their first experience in learning by television. Besides the traditional "three R's," they also study music, art, social studies, and science. At present, each student gets one hour of instruction daily through the television screen. Next fall this program will be expanded to include 12,000 students in 23 schools in Washington County, in which Hagerstown is located. By 1958 every school in the county will be tied into the program which will then include 20,000 students.

Equipment for this experiment has been donated by the Radio-Electronics - Television Manufacturers Association and the project is being financed by the Fund for the Advancement of Education.

Regular teachers have been given special instruction in teaching by television and have been relieved of many of their normal classroom assignments so they may devote the extra time necessary for the preparation of television programs. One teacher reports that she normally spends four hours in preparing for a 15-minute program. No teacher with a normal teaching schedule could possibly devote that much time to lesson preparation. But it must be remembered that one television teacher can give her lesson to hundreds of pupils at the same time.

Data will be gathered at Hagerstown to evaluate the effectiveness of television in meeting such current educational problems as these:

1. The enhancing of the status of teaching.
2. The relation of pupil-teacher ratio to the quality of instruction.
3. The continuation of rapidly increasing enrollments.
4. The lack of adequate classroom space.
5. The shortage of properly trained and certified teachers.
6. The organization of the school system to effect savings in personnel.
7. The distribution of the finances available for the school program.
8. The greater use of school, community and county resources.

● COLLEGES OF MEDICINE and dentistry have found particularly good uses for closed-circuit television because this medium enables several students to get a clear view of demonstrations and operations without being forced to crowd around an operating table or dental chair.

In this fashion, each instructional period would have required about 35 minutes. This would add up to 350 minutes of instruction, as opposed to the 20 minutes required using television. How does this teaching method compare to use of educational films and other visual aids? Dr. Hagle explains that "television is immediate while films of the rapidly-changing dental techniques are obsolete almost before they can be produced."

One of the big questions in the use of educational television is, "Just how good is it?" Here are the results of some studies that have been made to answer that

question.

In 1954, the Army completed a study designed to find out whether closed-circuit television could be used effectively to replace some of the face-to-face teaching in Army basic training. Fourteen hours of basic training materials were selected, and parallel television instruction was prepared. The same instructors were used for television and regular instruction. About 12 000 basic trainees were tested. These are the results, under matched conditions:

1. Television instruction proved at least as effective as regular instruction.
2. Television instruction was more effective for lower aptitude groups.
3. Television instruction was remembered at least as well as regular instruction.
4. Kinescope recordings proved at least as effective as regular instruction.

Subsequent studies by other branches of the armed forces have been made which tend to confirm the above findings of the Army.

A recent experiment by the Cincinnati Public Schools in which the facilities of educational television station WCET were used involved several hundred "control" students who studied chemistry via television. According to station reports, the results showed a "significant difference in grades *favoring* the students who took the course on television."

● IN AN EXPERIMENT to determine the effectiveness of teaching typing by television, Michigan State University taught this skill to two comparable groups each day for 48 days. Although typing *accuracy* of the television group was about the same as the classroom group, the television students were significantly *faster*.

At Pennsylvania State University, courses in general chemistry, general psychology, and psychology of marriage were taught for a full semester by television. Results showed that in 10 out of 11 tests given, there were no significant differences in learning between classes receiving direct instruction and those learning by television.

As educational television stations have grown in number and in size, three central agencies have developed to coordinate the movement: The Joint Council on Educational Television, the National Association of Educational Broadcasters, and The Educational Television and Radio Center.

The Joint Council on Educational Television, with offices at 1785 Massachusetts Ave., Washington 6, D. C., is concerned with the preservation and utilization of educational television channels. The Council represents the instructional television movement before the FCC, Congressional committees, and other government agencies. It also gives legal and technical advice to any group seeking to activate an educational television channel.

The National Association of Educational Broadcasters, located at Gregory Hall at the University

of Illinois in Urbana, includes in its membership educational institutions which own and operate educational radio and television stations. It serves the media in the following ways:

1. It provides advice on technical and engineering matters.
2. It maintains an educational radio and television personnel placement service.
3. It provides consulting service on legal matters.
4. It conducts research in educational broadcasting.
5. It provides a station management consulting service.
6. It conducts workshops, seminars and conventions to encourage the exchange of information among established and new stations.

The Educational Television and Radio Center at Ann Arbor, Michigan, develops and distributes educational programs for the affiliated stations, providing programs which feature great teachers and artistic performers who would not otherwise be available to local stations. The Center also provides information to the general public and to national organizations which support educational television. It is charged with the over-all development of support for instructional television. In brief, the Center does the following:

1. Provides a minimum number of hours of kinescope and film programming (currently six hours a week) to NET stations.
2. Stimulates and coordinates research in educational television.
3. Counsels new stations on programming.
4. Supplies speakers and exhibits for meetings of national groups and educational television foundations.
5. Maintains liaison with the 106 national organizations which have formally resolved to support educational television.

Another organization which is providing excellent financial support on a nation-wide basis is the Fund for the Advancement of Education. Last May, the fund announced the establishment of a National Program in the Use of Television in the Public Schools for which the Fund is making available nearly one million dollars.

Taking part in this program at the outset are eight large cities: Atlanta, Cincinnati, Detroit, Miami, Norfolk, Oklahoma City, Philadelphia, and Wichita; and two states: Nebraska and Oklahoma. Substantial grants have been made to the public school authorities in these cities and states on a matching dollar basis to begin regular classroom instructior over television in the elementary and high schools.

Dr. Alvin C. Eurich, vice president and director, has summed up the interests of the Fund by stating, "It is clear that the pressure of the teacher and building shortages combined is bringing about the widespread use of television for classroom instruction. An intensive effort must be made to find out all we can about content and method of television instruction in

order to realize the full potential in teaching of this powerful means of mass communication."

● HOW MUCH MONEY does it cost to set up and operate an educational television station? Generalizations are dangerous, but the price of a normal high power broadcast station usually exceeds $200,000. But considerable interest is being shown in low power stations. All the necessary equipment can be obtained for about $50,000 including the transmitter, antenna (without the tower), two vidicon studio cameras, a film camera, two 16mm. film projectors, automatic slide projector, a synchronizing generator, audio and lighting equipment, and miscellaneous switching and auxiliary apparatus. At present, some manufacturers are marketing 250-watt VHF station packages, complete down to theatrical makeup kits. It is estimated that operation of these stations will cost about $85,000 a year, depending on the size of the professional staff.

Here's how to get an ETV station in your community.

Now, finally, how can you get an educational television station for your city. Using the help of the three national agencies previously mentioned, you must take three initial steps:

1. Find out from the Joint Council if your community has one of the 258 channels reserved for educational use. If not, you can petition the FCC to reserve one for you.

2. Next, enlist the support of as many community organizations as possible. These should include schools and colleges, civic associations, parent-teacher groups and women's clubs. The broader your support, the easier the work will be.

3. Next, you must choose the type of station which will best serve the needs of your community and what type of station can be supported by the available financial support. You will have to decide whether your city needs a high power or low power station. The Joint Council can help you make these decisions.

Americans have always prided themselves on their modern, progressive ways. Progress has become a part of our tradition. While educational television is a comparative newcomer on the educational scene, we should not hesitate to grasp at its potential for bringing more and better education to more people. We should study every possibility of increasing our teaching efforts through this new and stimulating teaching tool.

Let me finish with a quotation from Dr. Thomas Clark Pollock of New York University. It should give you food for thought. Dr. Pollock said recently, "It now seems clear that television offers the greatest opportunity for the advancement of education since the introduction of printing by movable type. This comparison is made soberly."

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